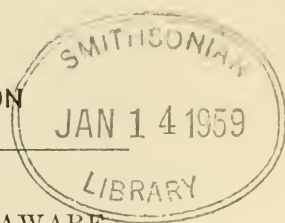


PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON



A NEW SPECIES OF CINARA FROM DELAWARE  
(APHIDAE)

F. C. HOTTES

I am indebted to Miss Louise M. Russell of the United States National Museum for sending me the material from which this new species is described and to Mr. H. E. Milliron for collecting it.

*Cinara tunicula* n.sp.

*Aptecrous viviparous* female.

Size and general color.—Length from vertex to end of cauda varying from 3.15 - 3.33 mm. Color in life not recorded, as represented by cleared mounted specimens as follows: head and thorax dark dusky brown with margins slightly darker. Thorax with pigmented areas large, more or less united along mid line. Posterior dorsal pigmented area of the thorax less extensive, more fragmented in outline. Dorsum of abdomen covered for the most part by a large pigmented area which extends forward in the middle, and which engulfs the cornicles on the dorsum so that they are not differentiated from it except by form. Antennal segments one and two concolorous with head, segments three and four pale dusky with apical regions darker. Fifth antennal segment with basal half pale dusky, remainder of segment pale brown. All of sixth antennal segment pale brown. All femora yellowish at base shading to brown, the brown being more extensive and darker on the metathoracic femora. Pro and mesothoracic tibiae with a short region near base brown, this followed by an extensive pale dusky region which shades into brown near the apex. Metathoracic tibiae with a short region near base brown, this followed by a short pale region which shades quickly into brown, so that more than one half of this segment is brown. Tarsal segments brown.

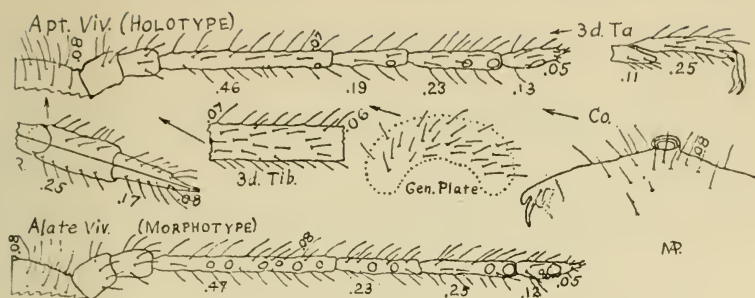
Head and thorax.—Width of head through the eyes .66 mm. Ocular tubercles small but well developed. Median transverse suture not dark, narrow, more or less incomplete on anterior half. Hair on dorsum of head not numerous, failing to reach posterior margin of head and region adjacent to eyes, about .08 mm. in length. Antennal segments with the following lengths: III .34 - .49 mm., IV .18 - .21 mm., V .21 - .24 mm., VI .13 + .05 mm. Third antennal segment with or without primary sensorium. Fourth antennal segment with primary sensorium and with or without one small secondary sensorium. Fifth antennal

segment with primary sensorium, with a wide rim, and one secondary sensorium. Primary sensorium on sixth antennal segment with wide rim, marginal sensoria in a row. Sixth antennal segment weakly imbricated at base, the imbrications better developed towards apex. Hair on antennae sparse, very fine, longer on anterior margin where they vary in length from .03 - .07 mm. rather upstanding, slightly more numerous on posterior margin. Rostrum reaching mid region of cornicles, last three segments with the following lengths: .25, .17 and .08 mm. Hairs on rostrum quite numerous as well as long. Mesosternal tubercle a rounded hump provided with some hairs. Lengths of prothoracic femora and tibiae as follows: .93, 1.29 mm. Lengths of metathoracic femora and tibiae as follows: 1.46, 2.52 - 2.58 mm. Hairs on metathoracic femora few, fine, upstanding, more numerous on anterior margin. Hairs on metathoracic tibiae fine, much shorter on basal region than near apex, also fewer and finer on this region. Much more numerous on inner margin near apex than on outer margin. Hairs on outer margin in mid region varying from .06 - .07 mm. in length. First metatarsal segment .11 mm. in length, with about twelve hairs on the ventral surface. Second metatarsal segment varying in length from .25 - .27 mm. Hairs on the ventral surface of this segment more numerous than the hairs on the dorsal surface, but of the same quality.

Abdomen.—Pigmented area on dorsum almost free from hairs, the few present, too short to measure, arising from clear areas. Hairs on lateral portions of abdomen and non pigmented areas very fine, sparse, about .06 mm. in length. Hairs on cornicles very sparse, except on constricted area where they are not numerous. Hairs on cornicles similar as to type, fine, varying in length from .06 - .08 mm. Extent of cornicle difficult to determine from the dorsum, but this can be determined from the ventral surface. The cornicles are quite shallow. Transverse pigmented spot anterior to cauda wide, provided with very fine setulae, hairs confined to a row along the posterior margin, the hairs are few and fine. Hairs on cauda confined to posterior margin. Cauda and anal plate with setulae. Hairs on ventral surface of abdomen numerous, similar to those on the sides. Genital plate broadly rounded on anterior, deeply excavated on the posterior. Hairs on genital plate covering surface.

*Alate viviparous female.*

Length 3.09 mm. Antennal segments darker than in the apterous viviparous female. Median transverse suture of the head dark, well developed. Ocular tubercles small but well developed. Width of head through the eyes .66 mm. Color of legs quite similar to legs of apterous viviparous female. Pigmented spot on dorsum of abdomen lacking. Antennal segments with the following lengths: III .47 - .51 mm., IV .23 mm., V .23 - .25 mm., VI .12 + .05 mm. Secondary sensoria on third antennal segment arranged in a row, varying in number from four to six, not all of the same size. Secondary sensoria on fourth antennal segment varying in number from one to two. The fifth antennal segment has one secondary sensorium. All secondary sensoria have rather wide rims. Hairs on anterior margin of third antennal segment more numerous than hairs on this margin in the case of the apterous viviparous female. The hairs on the third antennal segment are set at an

*Cinara tunicula* n.sp.

angle of about 60 degrees on the anterior margin and about 45 degrees on the posterior margin. On the anterior margin they are about .08 mm. in length. Hairs on lateral lobes very sparse, fine, confined more or less to a row on the inner margin, middle region of lobe with only a few hairs. Rostrum reaching to posterior edge of cornicles. Second fork of media closer to margin of wing than to first fork. Hairs on metathoracic tibiae slightly more numerous than the hairs on this segment in the apterous female. Length of prothoracic femora and tibiae .93, 1.29 mm. Lengths of metathoracic femora and tibiae 1.46, 2.52 - 2.58 mm. Cornicles at base .39 mm. Hairs on cornicles sparse, but more numerous on constricted area. Cornicles of this form higher than the cornicles of the apterous form. Outer margin of cornicles irregular. Hairs on dorsum of abdomen not numerous, fine, about as long as the hairs on the cornicles varying from .08 - .09 mm. in length, spaced for the most part closer together than their length. Hairs on ventral surface of abdomen much more numerous than the hairs on the dorsum, slightly shorter and much coarser. Transverse pigmented spot anterior to cauda wide, with very few hairs on its posterior margin. Anterior to this spot there is a small pigmented spot with very short setulae and a few short hairs.

In Palmer's key to the genus *Cinara* in "Aphids of the Rocky Mountain Region" which does not cover the region from which this species came, it keys to *C. glabra* (G&P.) It differs from *glabra* in not having the dorsum of the abdomen clothed with setulae, and in having the cornicles incorporated in the dorsal pigmented spot. In *glabra* the genital plate is much larger and has fewer hairs.

The unguis of *tunicula* is also too short for *glabra*. This species will not key in Tissot's key to the genus *Cinara* Florida Entomologist Vol. XXII, 1939.

Holotype apterous viviparous female, morphotype alate viviparous female, both deposited in the United States National Museum. Host, *Pinus virginiana*, taken on older branches, by H. E. Milliron Petersburg, Delaware May 22 and May 29, 1957.